

**REMARKS**

Please reconsider the application in view of the above amendment and the following remarks.

**Disposition of Claims**

Claims 1-9, 21 and 22 stand rejected. To further clarify the invention recited in independent claim 1, applicant has amended the claim to recite "wherein said plurality of fibers act as strength members to reinforce said material." Claims 1-9 and 21-22 remain pending.

**Examiner Interview**

Applicant appreciates the telephone interview granted by examiner George Wang on February 14, 2003. Applicant's attorney pointed out that the Falkenstein patent did not teach or suggest the material surrounding the optical fibers and also discussed the advantage of the material surrounding the optical fibers. Applicant's attorney further proposed an amendment to claim 1. The examiner stated that the proposed amendment may help to more clearly define the invention.

**Objections**

Claims 21 and 22 are objected to under 37 C.F.R. 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim. The examiner suggests that claims 21 and 22 fail to further limit the subject matter of a previous claim because the claims recite the manner in which a claimed apparatus is intended to be employed. Applicant traverses.

Applicant respectfully points out that dependent claim 21 further limits the subject matter of claim 4 by further defining the passageway as having "a narrow portion." Dependent claim 22 further limits the subject matter of claim 21 by further defining the ratio of the cross-sectional area of the fibers to the cross-sectional area of the narrow portion at "about 1/2." Thus, both of these dependent claims further limit the subject matter of a previous claim and comply with 37 C.F.R. 1.75(c).

Applicant further points out that the case cited by the examiner, *Ex parte Masham*, involves an issue of novelty over prior art and not an issue of proper claim dependency. Applicant directs the examiner to MPEP § 608.01(n) for a discussion of the proper test to be applied to determine improper claim dependency.

Accordingly, applicant requests that this objection under 37 C.F.R. 1.75(c) be withdrawn.

### **Rejections under 35 USC §103**

Claims 1, 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Falkenstein, et al. ("Falkenstein"). Claims 2 and 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Falkenstein in view of Tanabe, et al. ("Tanabe"). Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Falkenstein and Tanabe in view of Berry, et al. ("Berry"). Applicant traverses these rejections.

Applicant respectfully submits that the examiner has failed to establish a *prima facie* case of obviousness, because the prior art references fail to teach or suggest all of the claim limitations. See MPEP 2142. Independent claim 1 recites an optical fiber device comprising a plurality of optical fibers and a gas blocking device containing material surrounding the optical fibers. Falkenstein does not disclose or suggest both the plurality of optical fibers and the material surrounding the optical fibers.

The Office action fails to indicate where the material surrounding the optical fibers is taught or suggested in Falkenstein. The Office action refers to "a gas blocking device made of hot melt glue (col. 1, line 65-67)." However, this section of Falkenstein refers to an adhesive used to glue the single glass fiber close to the diode D. Moreover, the seal referred to in column 3, lines 48-50, of Falkenstein is created by the opaque cover K and not by hot melt glue, as asserted in the Office action in paragraph 5. Because Falkenstein fails to teach or suggest the material surrounding the plurality of optical fibers, the Office has failed to establish a *prima facie* case of obviousness with respect to independent claim 1.

The Office action acknowledges that Falkenstein fails to specifically disclose a plurality of optical fibers. The Office action, referring to column 1, lines 14-20 of Falkenstein, suggests that it would have been obvious to use a plurality of fibers because "one would be

motivated to conduct modulated light pulses with information not to just one but multiple receiver modules.” Applicant disagrees.

Applicant respectfully points out that Falkenstein (in column 1, lines 14-20) does not suggest the desirability of a gas blocking device containing a material surrounding a plurality of optical fibers extending through the gas blocking device. Although Falkenstein may refer to modules in plural, this alone is not enough to suggest the desirability of a plurality of fibers extending through a single gas blocking device and surrounded by a material.

Moreover, the glass fiber bushing disclosed in Falkenstein appears to be designed specifically for a single glass fiber to allow the glass fiber tip S to be precisely adjusted (*See* Falkenstein, column 5, lines 62-68). Modifying this glass fiber bushing to accommodate a plurality of fibers would likely render the prior art unsatisfactory for its intended purpose. *See* MPEP 2143.01. Even if there was motivation to modify Falkenstein to use a plurality of optical fibers with a plurality of receiver modules, the modification would likely result in a plurality of glass fiber bushings each with a single fiber. Such a modification would not result in the claimed invention, which comprises a gas blocking device including material surrounding a plurality of fibers. For this additional reason, Applicant submits that independent claim 1 would not have been obvious over Falkenstein.

In the Response to Arguments section of the Office action, the examiner asserts that the plurality of fibers would have been obvious because “mere duplication of the essential working parts of a device involves only routine skill in the art and cannot be considered inventive.” Applicant respectfully points out that the duplication of optical fibers is not routine, especially in the Falkenstein glass fiber bushing which appears to be designed for a single glass fiber. In the Background Information section of the present application, applicant describes some of the difficulties encountered with previous attempts at accommodating an increased number of optical fibers. Although increasing the number of fibers often resulted in damage to fibers, the inventors in the present application discovered that the fibers of the present invention, when surrounded by the material, act as strength members to reinforce the material similar to reinforced concrete. Thus, the present invention prevents cracking or other damage to the material and subsequent damage to the plurality of fibers. *See* present specification, page 7, lines 23-26, and page 8, lines 1-3. Applicant submits, therefore, that it would not have been obvious

to merely duplicate the fibers in Falkenstein to provide a plurality of fibers extending through a gas blocking device.

Applicant further submits that the dependent claims would not have been obvious for the same reasons stated above. The arguments made with respect to the dependent claims in the previous reply dated October 29, 2002 are also incorporated herein by reference. Accordingly, applicant requests that the rejections under 35 U.S.C. 103 be withdrawn.

#### **Information disclosure statement**

An information disclosure statement (IDS) with a form PTO-1449 was filed on January 25, 2001 with the above-identified application, but the form PTO-1449 has not been returned with the examiner's initials indicating that the cited references have been considered. Applicant requests that the initialed form PTO-1449 be sent with the next office communication.

#### **Conclusion**

The claims have been shown to be allowable over the prior art. Applicant believes that this paper is responsive to each and every ground of rejection cited by the Examiner in the Action dated December 3, 2002. Applicant also submits that the above amendments clearly place the claims into condition for allowance and do not add new matter or require further consideration and/or search. Accordingly, applicant respectfully requests entry of the amendment and favorable action in this application.

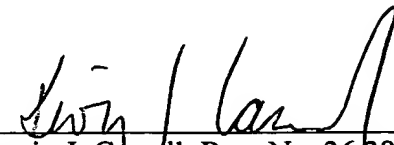
Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**VERSION WITH MARKINGS TO SHOW CHANGES MADE.**"

Please apply any charges not covered, or any credits, to Deposit Account 50-0309 (Reference Number Girzone 2).

The examiner is invited to telephone the undersigned, applicant's attorney of record, to facilitate advancement of the present application.

Respectfully submitted,

Date: 3-3-03

By:   
Kevin J. Carroll, Reg. No. 36,384

DEVINE, MILLIMET & BRANCH, P.A.  
111 Amherst Street  
P.O. Box 719  
Manchester, NH 03105

Telephone: (603) 669-1000  
Facsimile: (603) 669-8547

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**In the Claims:**

Claim 1 has been amended as follows:

1. (Amended) An optical fiber device comprising:

a housing having a wall, wherein said housing is vacuum drawn and pressurized with a gas to prevent moisture from entering said housing;

an optical fiber holding tube extending through said wall and having a first end and a second end, said first end of said optical fiber holding tube contained in said housing and said second end of said optical fiber holding tube located outside of said housing;

a plurality of optical fibers extending from said first end of said optical fiber holding tube to said second end of said optical fiber holding tube without interruption; and

a gas blocking device attached to said first end of said optical fiber holding tube, wherein said optical fibers extend through said gas blocking device, and wherein said gas blocking device contains material surrounding said optical fibers such that said gas blocking device creates a seal substantially preventing gas from passing through said optical fiber holding tube, **and wherein said plurality of fibers act as strength members to reinforce said material.**